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Johnson et al.

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[54] **PLUGGABLE CONNECTOR SYSTEMS FOR FLEXIBLE ETCHED CIRCUITS**

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[57] **ABSTRACT**

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439/329

[58] Field of Search **439/67, 329, 493, 496,**
439/498, 499, 66, 91

A pluggable connector system (10) has a male housing (11, 11', 11'', 11''') snapped together with a female housing (12, 12', 12'', 12''') thereby providing a quick-disconnect feature. One of the housings, or both, carries a flexible etched circuit (16). The flexible etched circuit (16) may engage another flexible etched circuit (16) or, via a suitable interface, may engage a printed circuit board (17) having at least one circuit pad (19) thereon. One embodiment of a suitable interface is a flexible electrical connector (21) having a plurality of circuit traces on an elastomeric core. In another embodiment, the flexible etched circuit (16) is backed up by resilient means (33, 35) and engages the circuit pad (19) directly. The means for releasably retaining the housings (11, 11', 11'', 11''' and 12, 12', 12'', 12''') comprises a pair of spring-loaded manually-releasable latches (24, 24', 25) or a pair of bifurcated latching ears (43, 44).

[56] **References Cited**

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12 Claims, 16 Drawing Sheets

